

The vent-pipes mentioned are generally as a safeguard against siphonage from the causes enumerated, though they cause increased evaporation from water-seals, and thus prove a drawback when fixtures are unused for some time.

In fact, it is absolutely necessary to run water into fixtures periodically to prevent sewer air from entering rooms, particularly when unused and unventilated.

The soil-pipes H H extended through the roof and open at top effectually prevent traps being forced by back pressure from the sewers.

In addition to the loss of water-seal through siphonage, evaporation and back pressure, capillary attraction may be added; for if threads or hairs extend from the water in the trap over the bend, the water may be drawn off along the filaments by capillary attraction.

A deep seal is a protection against all the causes named, though nothing can take the place of continual supervision. Eternal vigilance alone is the price of health. It must be borne in mind too, that the water in traps absorbs sewer-gas and passes some of its constituents into the room. It is true that the amount is very small and considered harmless, for experiment "seems to indicate that germs, even if contained in the water of traps, are not liberated from it, as was hitherto supposed, unless the water is violently agitated"; still it is in every way desirable and on the side of safety to change the water of traps every few days, and keep down any slight odor that might arise, so that the air of rooms is always sweet and pure.

The water-closets, in the figure, W W W, are of the long and short hopper and washout kinds, without any mechanical device (as in the pan, valve and plunger closets) to get out of order and become foul. It is true that these closets become foul at times, but then they can be readily cleaned, which cannot be said of the mechanical closets, whose foul parts are not so easily got at. The above closets are flushed from the special cisterns M M M.

X X is the rain-leader delivering the water into the running-trap of the house-drain.